

Docket No.: 60188-413



PATENT

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	:	Customer Number: 20277	
	:		
Gaku SUGAHARA, et al.	:	Confirmation Number: 6059	
	:		
Application No.: 09/890,095	:	Group Art Unit: 2828	Certificate
Patent No.: 6,798,811 B1	:		OCT 29 2004
	:		
Filed: July 27, 2001	:	Examiner: Dung T. Nguyen	of Correction
Issued: September 28, 2004	:		
	:		
For: SEMICONDUCTOR LASER DEVICE, METHOD FOR FABRICATING THE SAME, AND OPTICAL DISK APPARATUS	:		

REQUEST FOR CERTIFICATE OF CORRECTION UNDER 37 CFR 1.323

Mail Stop 4 (Certificate of Correction)
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In reviewing the above-identified patent, a printing error was discovered therein requiring correction in order to conform the Official Record in the application. The error was made in good faith and was of a clerical or typographical nature or of minor character.

The error noted is set forth on the attached copy of form PTO-1050 Rev. 2-93 in the manner required by the Commissioner's Notice.

Specifically, in Column 12, line 11, Claim 9, the word --substrate-- was omitted after the phrase "cleaving or etching the". This error is apparently due to the fact that the word was omitted in applicant's amendment of December 2, 2003. The correct version is shown in applicant's

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09/890,095

Patent 6,798,811

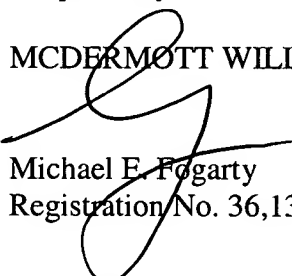
amendment of June 13, 2003; copies of the relevant pages of the amendment are attached for your information and convenience.

Please charge the \$100.00 filing fee to our Deposit Account 500417.

Please charge any shortage in fees due in connection with the filing of this paper to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

MCDERMOTT WILL & EMERY LLP



Michael E. Fogarty
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Date: October 25, 2004

OCT 29 2004

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,798,811 *B1*

DATED : September 28, 2004

INVENTOR(S) : Gaku SUGAHARA, et al.

It is certified that error appears in the above-identified patent and that said Letter Patent is hereby corrected as shown below:

COLUMN 12, line 11, Claim 9,

after the phrase "cleaving or etching the", insert the word --substrate--.

OCT 29 2004

Applicant: Gaku SUGAHARA, et al. Docket No. 60188-413

Title: SEMICONDUCTOR LASER DEVICE, METHOD FOR FABRICATING THE SAME, AND OPTICAL DISK APPARATUS

Date Sent: 6/13/2003 ☒ Hand Carried ☐ Fax ☐ Electronic ☐ Cert. of Mailing ☐ Serial/Reg./Patent No. 09/890,095

☒ Transmittal Letter ☐ New Patent App ☐ Utility ☐ Design ☐ Cont. ☐ CIP ☐ Div. ☐ PCT ☐ CPA ☐ RCE ☐ Prov

☐ Other: _____ Letter submitting _____ pages of drawings

_____ pages of Specification _____ Req. for Approval of Drawing Amendments

_____ pages of Claims _____ Req. for Oral Hearing

_____ pages of Abstract _____ Not. of Appeal ☐ Appeal Brief ☐ Reply Brief

_____ pages of Formal/Informal Drawings _____ Rule 312 Amendment/Letter

☐ Small Entity ☐ Large Entity _____ Req. for Acknowledgement of Cited Art

☐ Declaration/Power of Attorney _____ Issue Fee

☐ Recordation of Assignment/Security Agreement _____ Publication Fee

☐ Information Disclosure Statement _____ Req. for Certificate of Correction

_____ Form PTO 1449 _____ Maintenance Fee for _____ years after grant

_____ copies of cited references _____ Fee Address Indication Form

☐ Preliminary Amendment _____ Terminal Disclaimer

☐ Response to Missing Parts Notice _____ Petition to Commissioner

☐ Resp. to Notice to Correct App. Papers _____ Status Inquiry

☐ Certified Copy of Priority Doc. _____ Other

☐ Claim for Convention Priority _____

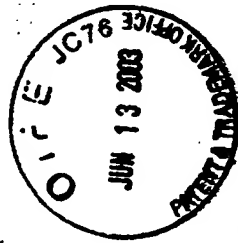
☒ Response/Amendment to Office Action of _____

☒ Request for One month Extension of Time _____ February 14, 2003

Check for \$	<input type="checkbox"/> Charge Deposit Acct. 500417\$	110.00	Atty Init.	MEF	Trqr. #	3328	Secy. or PL:	MNewman
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THE PATENT AND TRADEMARK OFFICE DATE STAMPED HEREON IS ACKNOWLEDGEMENT THAT THE ITEMS, CHECKED ABOVE, WERE RECEIVED BY THE PTO ON THE DATE STAMPED.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Gaku SUGAHARA, et al.

Serial No.: 09/890,095

Filed: June 5, 2003



Group Art Unit: 2828

Examiner: J. KAHN

For: SEMICONDUCTOR LASER DEVICE, METHOD FOR FABRICATING THE SAME, AND OPTICAL DISK APPARATUS

Mail Stop

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Dear Sir:

Transmitted herewith is an Amendment in the above-identified application.

☐

No additional fee is required.

☐

Applicant is entitled to small entity status under 37 CFR 1.27

☒

Also attached: Petition For Extension of Time

The fee has been calculated as shown below:

	NO. OF CLAIMS	HIGHEST PREVIOUSLY PAID FOR	EXTRA CLAIMS	RATE	FEE
Total Claims	16	20	0	\$18.00 =	\$0.00
Independent Claims	4	5	0	\$84.00 =	\$0.00
Multiple claims newly presented					\$0.00
Fee for extension of time					\$110.00
Total of Above Calculations					\$0.00
					\$110.00

☒ Please charge my Deposit Account No. 500417 in the amount of \$110.00. An additional copy of this transmittal sheet is submitted herewith.

☒ The Commissioner is hereby authorized to charge payment of any fees associated with this communication or credit any overpayment, to Deposit Account No. 500417, including any filing fees under 37 CFR 1.16 for presentation of extra claims and any patent application processing fees under 37 CFR 1.17.

Respectfully submitted,

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Date: June 13, 2003



ATTORNEY DOCKET NO. 60188-413
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Gaku Sugahara, et al.

Serial No.: 09/890,095

Filed: June 5, 2003

For: SEMICONDUCTOR LASER DEVICE, METHOD FOR FABRICATING
THE SAME, AND OPTICAL DISK APPARATUS

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) Group Art Unit: 2828
)
) Examiner: J. KAHN
)

AMENDMENT UNDER 37 C.F.R. § 1.111

Mail Stop Non-Fee Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Office Action dated February 14, 2003, having a shortened statutory period for response set to expire May 14, 2003, a petition for a one month extension of time up to and including June 14, 2003, please amend the above-identified application as follows:

IN THE SPECIFICATION:

Please amend the third full paragraph on page 21 to read as follows:

--In addition, a Group III-V nitride semiconductor, containing gallium nitride as a main component, is used a semiconductor material for the violet-light-emitting semiconductor laser device with an oscillation wavelength of about 400nm. Alternatively, any Group [II-IV] II-VI

compound semiconductors such as zinc selenide (ZnSe), zinc sulfide (ZnS) and zinc oxide (ZnO) may also be used.--

IN THE CLAIMS:

Please amend claims 1, 3-5, 7, 8, 12, 13, 15 and 16. The amendments are based on Fig. 1 and the description of Fig. 1 in the present specification.

1. (Currently amended) A semiconductor laser device [characterized by] comprising:
a resonant cavity [made up of a plurality of semiconductor layers] disposed between a n-type compound semiconductor layer and a p-type compound semiconductor layer at the main surface and the opposite surface, a light is emitted along the interfaces of the n-type compound semiconductor layer and the p-type compound semiconductor layer by applying a voltage to each compound semiconductor layer; and
a reflective film[, which contains niobium oxide and is formed on] adhered to an end facet of the resonant cavity,
wherein the reflective film is composed of a first dielectric layer and a second dielectric layer containing niobium oxide.

3. (Currently amended) The semiconductor laser device of Claim 1, [characterized in that] wherein the [semiconductor layers] n-type compound semiconductor layer and the p-type semiconductor layer are made of Group III - V nitride semiconductors.

4. (Currently amended) [A semiconductor laser device characterized by comprising:

a resonant cavity made up of a plurality of semiconductor layers; and

a reflective film, which is formed on an end facet of the resonant cavity and includes a first dielectric layer and a second dielectric layer having a refractive index greater than that of the first dielectric layer,

the device being characterized in that the second dielectric layer is made of niobium oxide] The semiconductor laser device of Claim 1, wherein a refractive index of the second dielectric layer is greater than a refractive index of the first dielectric layer.

5. (Currently amended) The semiconductor laser device of Claim [4] 1, [characterized in that] wherein the first dielectric layer is made of silicon dioxide or aluminum oxide.

7. (Currently amended) The semiconductor laser device of Claim 4, [characterized in that] wherein the [semiconductor layers] n-type compound semiconductor layer and the p-type semiconductor layer are made of Group III - V nitride semiconductors.

8. (Currently amended) [A semiconductor laser device characterized by comprising:
a resonant cavity made up of a plurality of semiconductor layers; and
a reflective film, which is formed on an end facet of the resonant cavity by alternately stacking first and second dielectric layers, each said second dielectric layer having a refractive index greater than that of the first dielectric layers,

the device being characterized in that at least one of the second dielectric layers, which is closest to the end facet of the resonant cavity, is made of niobium oxide] The semiconductor

laser device of claim 1, wherein the reflective film is formed by alternately laminating a plurality of first dielectric layers and a plurality of second dielectric layers containing niobium oxide.

12. (Currently amended) A method for fabricating a semiconductor laser device,
[characterized by] said method comprising the steps of:

[forming a resonant cavity structure by] sequentially depositing [a plurality of semiconductor layers] a n-type compound semiconductor layer, a resonant cavity, and a p-type compound semiconductor layer on a substrate;

exposing an end facet of a resonant cavity [on the semiconductor layers] in an emitting direction by cleaving or etching the substrate [on which the semiconductor layers have been deposited]; and

forming a reflective film [containing niobium oxide] composed of a first dielectric layer and a second dielectric layer containing niobium oxide on the exposed end facet of the resonant cavity.

13. (Currently amended) The method of Claim 12, [characterized in that] wherein the step of forming the reflective film includes the step of [forming the reflective film as a multilayer structure including a first dielectric layer with a refractive index smaller than that of niobium oxide and a second dielectric layer of niobium oxide] alternately depositing a plurality of first dielectric layers and a plurality of second dielectric layers containing niobium oxide.

15. (Currently amended) The method for Claim 12, [characterized in that] wherein the [semiconductor layers] n-type compound semiconductor layer and the p-type semiconductor layer are made of Group III-V nitride semiconductors.

16. (Currently amended) An optical disk apparatus [characterized by] comprising:
a light-emitter including [a] the semiconductor laser device of claim 1;
a condensing optical system that condenses laser light emitted from the light-emitter on a storage medium on which data has been recorded; and
a photodetector that detects part of the laser light that has been reflected from the storage medium[,
the laser device being characterized by including:
a resonant cavity made up of a plurality of semiconductor layers; and
a reflective film, which contains niobium oxide and is formed on an end facet of the resonant cavity].

REMARKS

I. Introduction

In response to the pending Office Action, Applicants have amended the specification so as to correct an inadvertent typographical error in the specification. In addition, claims 1, 3-5, 7, 8, 11-13, 15 and 16 have been amended so as to address the rejection set forth under 35 U.S.C. § 112, second paragraph, as well as to further distinguish the present invention over the cited prior art. Support for the amendments to the claims can be found, for example, in Fig. 1 and the corresponding portion of the disclosure.

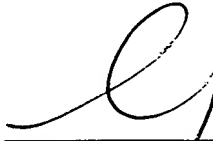
The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-0417.

Respectfully submitted,

McDERMOTT, WILL & EMERY

Date: 6/13/03

By:


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